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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,721	07/06/2004	Hiroaki Sudo	L9289.04146	6718

24257 7590 10/01/2008

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EXAMINER	
BRANDT, CHRISTOPHER M	
ART UNIT	PAPER NUMBER
2617	
MAIL DATE	DELIVERY MODE
10/01/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/500,721	SUDO, HIROAKI	
	Examiner	Art Unit	
	CHRISTOPHER M. BRANDT	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 June 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 July 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/15/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement submitted on April 15, 2008 has been considered by the examiner and made of record in the application file.

Response to Amendment

This Action is in response to applicant's amendment / arguments filed on June 3, 2008. **Claim 14** is now currently pending in the present application. **This Action is made FINAL**.

Response to Arguments

Applicant's arguments filed June 3, 2008 have been fully considered but they are not persuasive.

With regard to applicant's argument that the Applicants note that Okamoto discloses reducing the amount of multiplexing applied to a multiplex signal as the communication error rate increases (see Okamoto col. 13, lines 55-63), but Okamoto does not disclose changing a ratio of multiplexing within the multiplex signal, as recited in claim 14, the examiner respectfully disagrees. Okamoto does disclose reducing the amount of multiplexing applied to a multiplex signal as the communication error rate increases (as noted above by applicants) but does change a ratio of multiplexing within the multiplex signal (column 13 lines 55-63). This can be seen by figures 4a and 6b, which Okamoto clearly states in column 13 lines 25-29 that these figures apply to the method in figure 11. Observing figures 4a and 6b, one will notice that there are two sets of data, simplex and multiplex data, or signals other than the retransmission signals and the retransmission signals (also see column 7 lines 4-58). Therefore, Okamoto does disclose a control section that detects a number retransmission for the retransmission signal, increases the

set of degree of multiplexing as the detected number of retransmissions increases, and decreases a degree of multiplexing for the signals other than the retransmission signal spread by the plurality of spreading sections as the detected number of retransmission increases.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 14 is rejected under 35 USC 103(a) as being unpatentable over **Yamada et al. (US PGPUB 2001/0014091 A1, hereinafter Yamada)** in view of **Takahashi et al. (US Patent 5,881,099, hereinafter Takahashi)** and further in view of **Okamoto (US Patent 6,266,360 B1)**.

Consider **claim 14**. Yamada discloses a code division multiple access transmitting apparatus (paragraphs 92, 93) comprising:

a plurality of spreading sections that perform spreading processing separately for a retransmission signal using different spreading codes (figure 2, paragraph 94, read as legends 7-

1, 7-2, 7-3, . . . , 7-M denote spectrum spreading modulators for generating diffusion codes mutually orthogonal with the M-string parallel signals);

a control section that detects a number of retransmissions for the retransmission signal and determines an uplink interference value obtained by the plurality of spreading sections based on the detected number of retransmissions (figure 2, paragraphs 94, 96, read as legend 16 denotes a control section for extracting from the memory the data which has been requested to be retransmitted based on a retransmission request signal obtained from the data detector, which the retransmission request signal also includes a measured uplink interference value to the mobile station);

a multiplexing section that multiplexes the retransmission signals spread by the plurality of spreading sections based on an uplink interference value (figure 2, paragraph 96, read as the multiplex number at the mobile station 1 can take values from 1 to M. For example, when the multiplex number is M, the parallel signals are transmitted to only the spectrum spreading modulator corresponding to this number N (where N is an integer equal to or above 1 and less than M)); and

a transmitting section that transmits the multiplexed retransmission signal (figure 2, paragraph 94, read as legend 10 denotes a transmitter for superimposing a carrier transmitted from the carrier generator on an output of the adder, and for outputting a superimposed result from an antenna); and

Yamada discloses the claimed invention but fails to explicitly teach a degree of multiplexing.

However, Takahashi discloses a degree of multiplexing (column 28 lines 63-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Takahashi into the invention of Yamada so that the spreading code can be generated by utilizing the characteristics of the PN codes and the HF code (column 28 lines 63-67).

In addition, Yamada and Takahashi fail to explicitly teach a control section that detects a number of retransmissions for the retransmission signal and increases a ratio of the set degree of multiplexing to a degree of multiplexing for the signals other than the retransmission signal spread by the plurality of spreading sections as the detected number of retransmissions increases.

However, Okamoto teaches a control section that detects a number of retransmissions for the retransmission signal and increases a ratio of the set degree of multiplexing to a degree of multiplexing for the signals other than the retransmission signal spread by the plurality of spreading sections as the detected number of retransmissions increases (column 13 lines 55-60, read as The packets are transmitted first at the maximal number of multiplexed data while the number of ACK signals is predominant. When the number of NAK signals increases and exceeds the preset ratio of 1:3, the number of multiplexed data is reduced to decrease the error rate of transmissions).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teachings of Okamoto into the invention of Yamada and Takahashi in order to enable the system to attain the maximal throughput (column 13 line 67).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street

Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Brandt whose telephone number is (571) 270-1098. The examiner can normally be reached on 7:30a.m. to 5p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Christopher M. Brandt

C.M.B./cmb

September 23, 2008

/George Eng/

Supervisory Patent Examiner, Art Unit 2617